SECTION 00853

HYDRATED LIME

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Products and procedures for incorporating hydrated lime into all asphalts mixes.

1.2 REFERENCES

A. ASTM C 110: Physical Testing of Quicklime, Hydrated Lime, and Limestone.

B. ASTM C 1097: Hydrated Lime for Use in Asphaltic-Concrete Mixtures.

C. AASHTO M 303: Lime for Asphalt Mixtures.

D. AASHTO T 26: Quality of Water to be Used in Concrete.

E. AASHTO T 84: Specific Gravity and Absorption of Fine Aggregate.

F. AASHTO T 85: Specific Gravity and Absorption of Coarse Aggregate.

G. AASHTO T 255: Total Moisture Content of Aggregate by Drying.

1.3 QUALITY ASSURANCE

A. Prequalification: Hydrated Lime, through UDOT's Quality Management Plan for Hydrated Lime.

PART 2 PRODUCTS

2.1 HYDRATED LIME

A. Hydrated Lime: Meet AASHTO M 303, Type I, as specified.
   1. Conform physical requirements to ASTM C 1097, subparagraph d.1.
   2. Use test method ASTM C 110, paragraph 5.4.

2.2 WATER

A. Potable Water. AASHTO T 26

PART 3 EXECUTION

3.1 APPLICATION

A. Add hydrated lime to all asphalt pavement mixes.
   1. Add the determined quantity of lime, following mix design.
   2. Base the amount of hydrated lime used on the dry weight of the aggregate.
   3. Use either Method A or B, following AASHTO T 84, AASHTO T 85, and AASHTO T 255, unless Method B is called for in the bid schedule.

B. Method A: Lime Slurry: One part lime and three parts water by weight.
   1. Maintain the lime slurry mix in a malted milk consistency.
   2. Deliver lime slurry to the twin shaft pugmill for mixing with aggregate.

C. Method B: Lime and Aggregate Stockpile Marination:
   1. Marinate the aggregate in the stockpile for 24 hours.

D. Mixing Methods A and B: Provide a horizontal twin shaft pugmill.
   1. Adjust mixing paddles in the pugmill so that the aggregate being discharged is completely coated by the lime slurry.
   2. Do not allow volume of material in the pugmill to extend above the vertical position of the blade tips.

3.2 CONTROLLING AND MONITORING

A. Control the lime batching operation by the Program Logic Control (PLC) System based upon production set up data.

B. Monitor the following aspects and record on the computer data log printout:
   1. Display target and actual rates.
   2. Belt weight bridge for lime.
   3. Locked-in water meter.
   4. Meter to transfer lime slurry.
   5. Closed end loop to mainframe computer.

3.3 QUALITY CONTROL

A. Tolerance Controls
   1. Tolerance lime weight vessel static calibration ∀ 1.5 percent.
   2. Dynamic delivery calibration ∀ 1.5 percent.
   3. Inlet flow meter ∀ 2 percent.
   4. Discharge flow meter ∀ 1.5 percent.

B. Verification
   1. Submit to the Engineer Post Lottman Data on Hot Mix Asphalt.
   2. Meet the system Tensile Stress Requirement.

END OF SECTION